

DECOMPOSITION OF ENVIRONMENTAL TIME SERIES FROM DIFFERENT UPWELLING AREAS

First International CEOS Meeting, Sept. 1994

Roy Mendelsohn
PSEG
Monterey, CA
USA

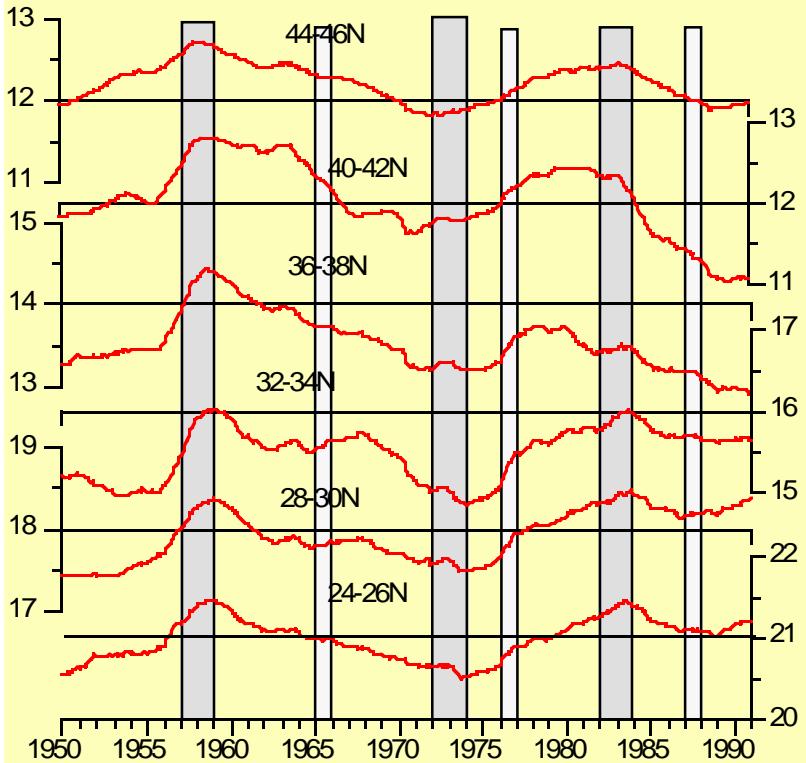
Claude Roy
ORSTOM
Paris, FRANCE

PURPOSE OF DECOMPOSITION

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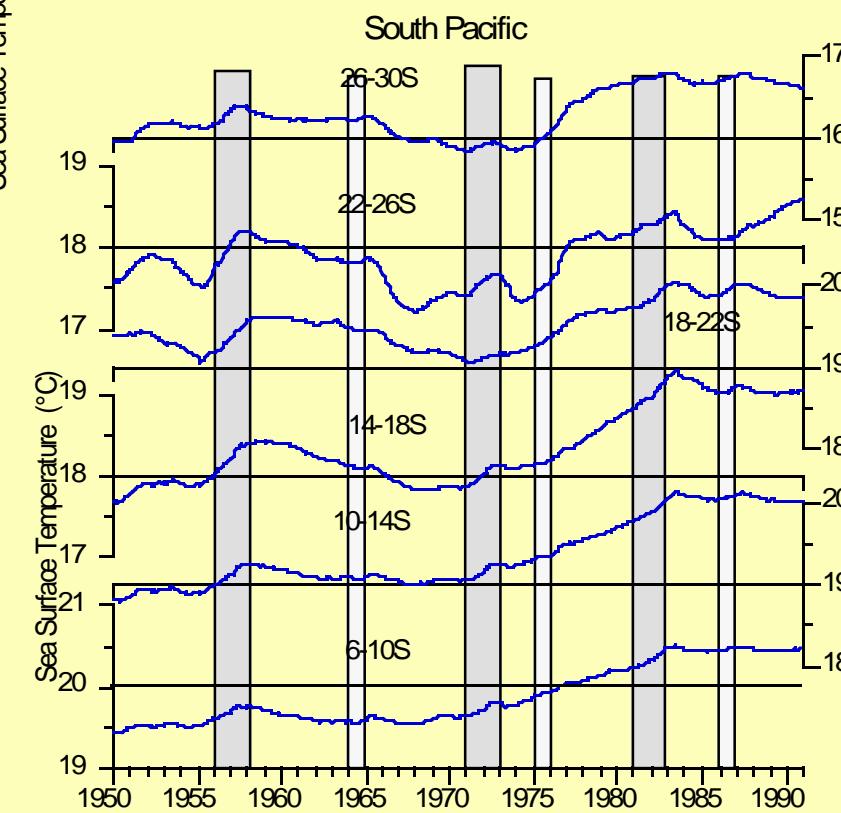
- Examine what is happening in the environment - without masking due to aggregation (EOFs, Canonical variates etc.)
- Find regions of common dynamics
- Determine which events had lasting changes (trend) as compared to events that passed through the system (AR)
- Examine amplitude and phase changes in seasonal component

North Pacific



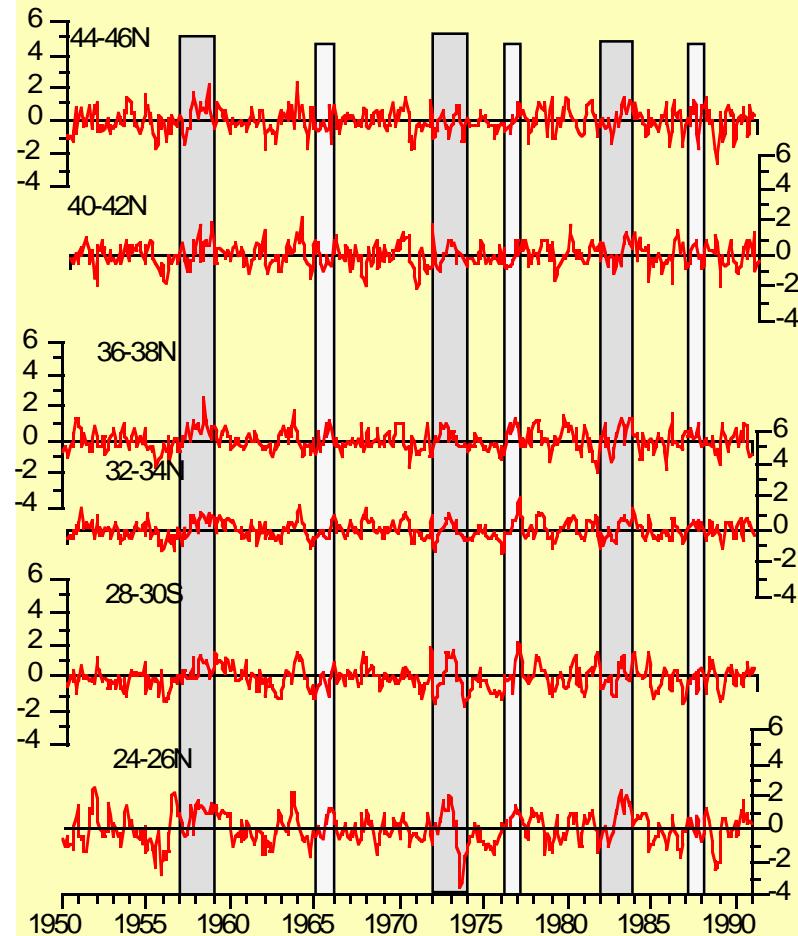
LONG TERM TREND

SST

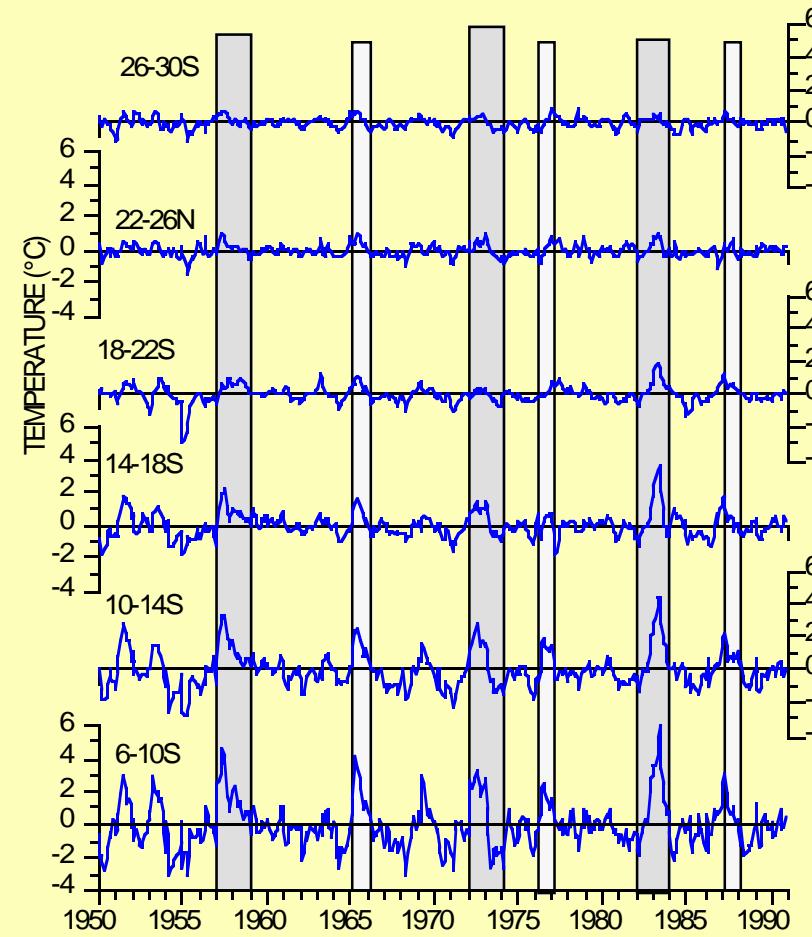


NORTH PACIFIC

AUTOREGRESSIVE TERM

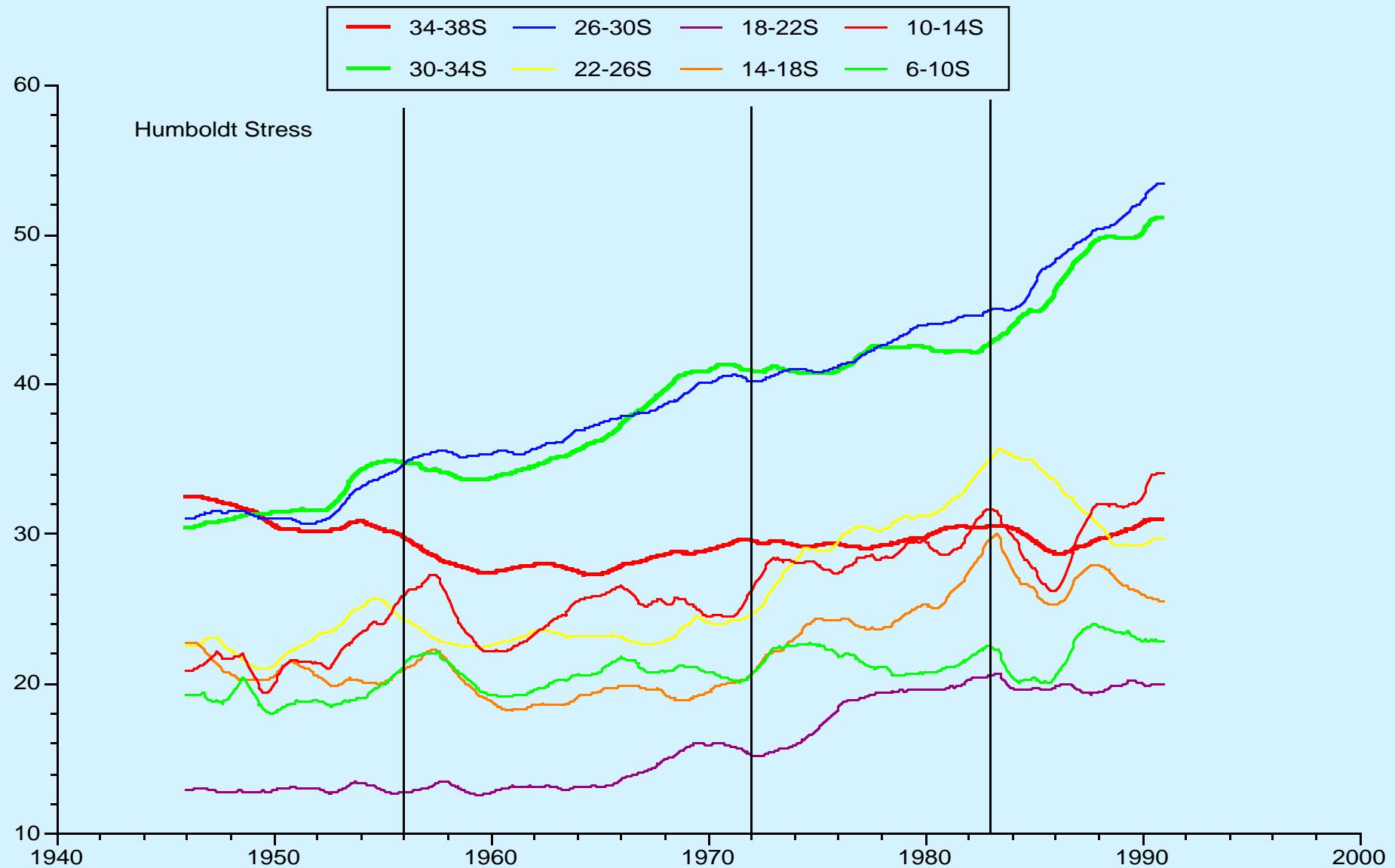
SST

SOUTH PACIFIC



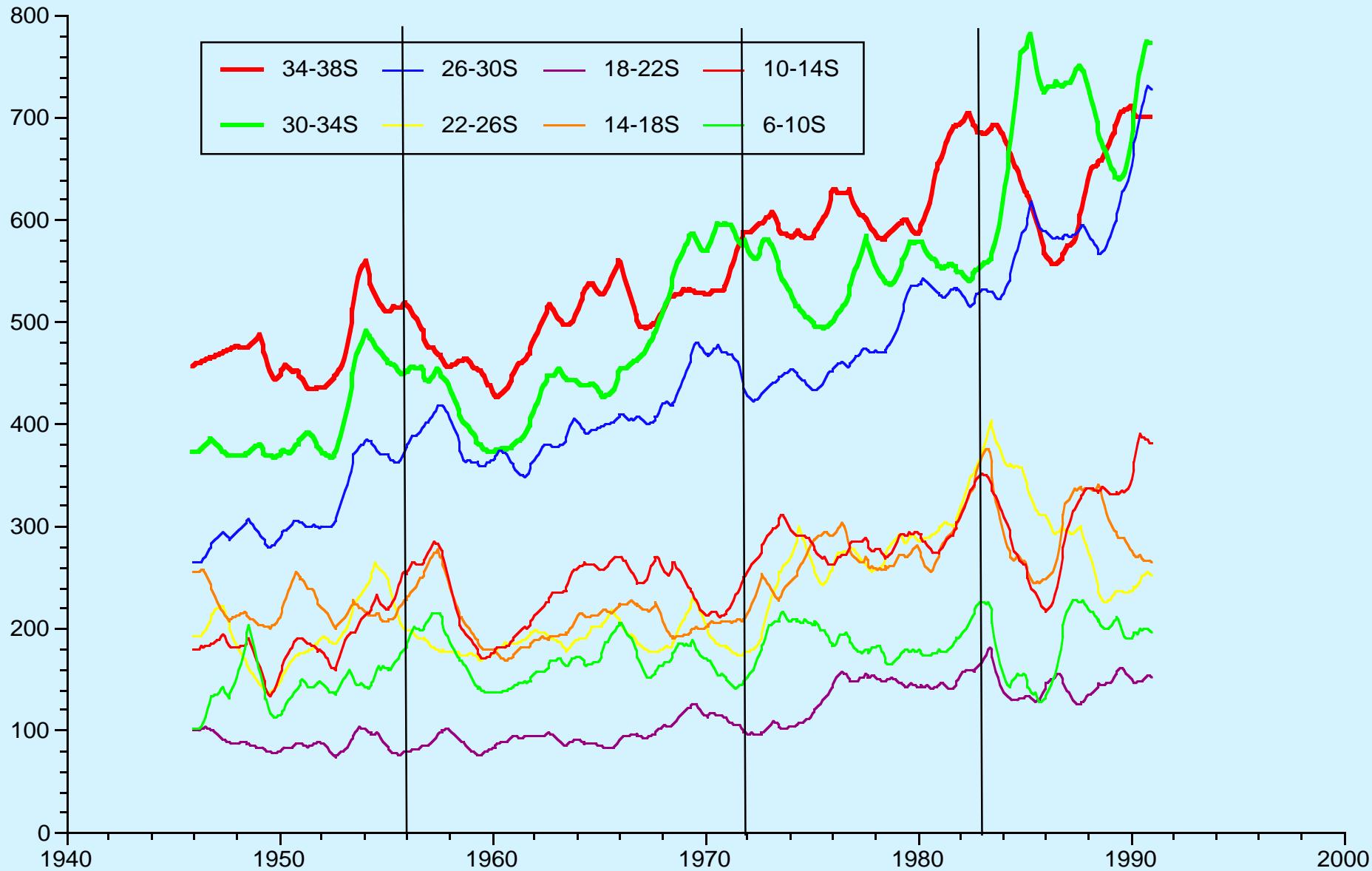
HUMBOLDT CURRENT N-S STRESS

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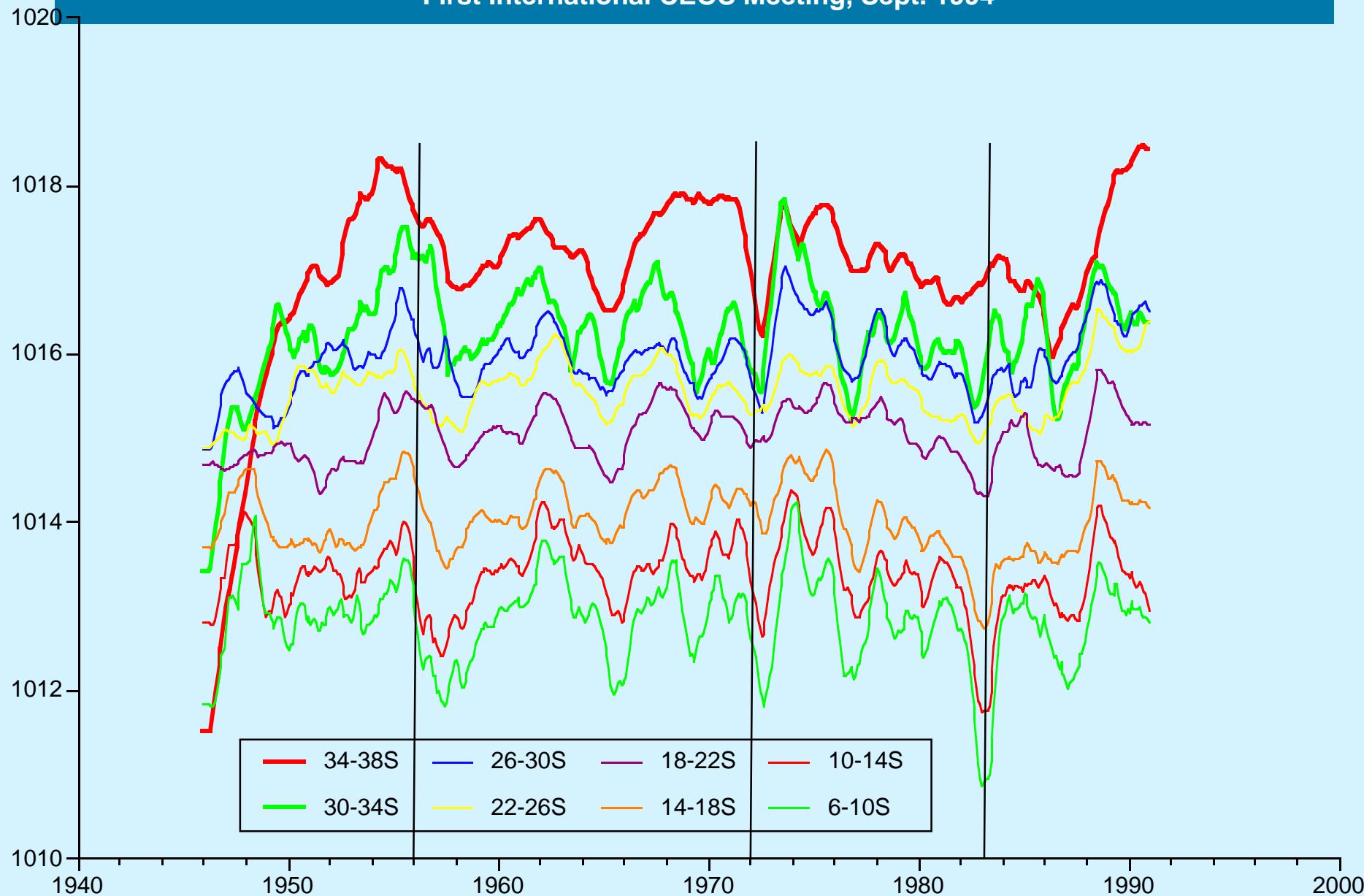
HUMBOLDT CURRENT WIND SPEED CUBED

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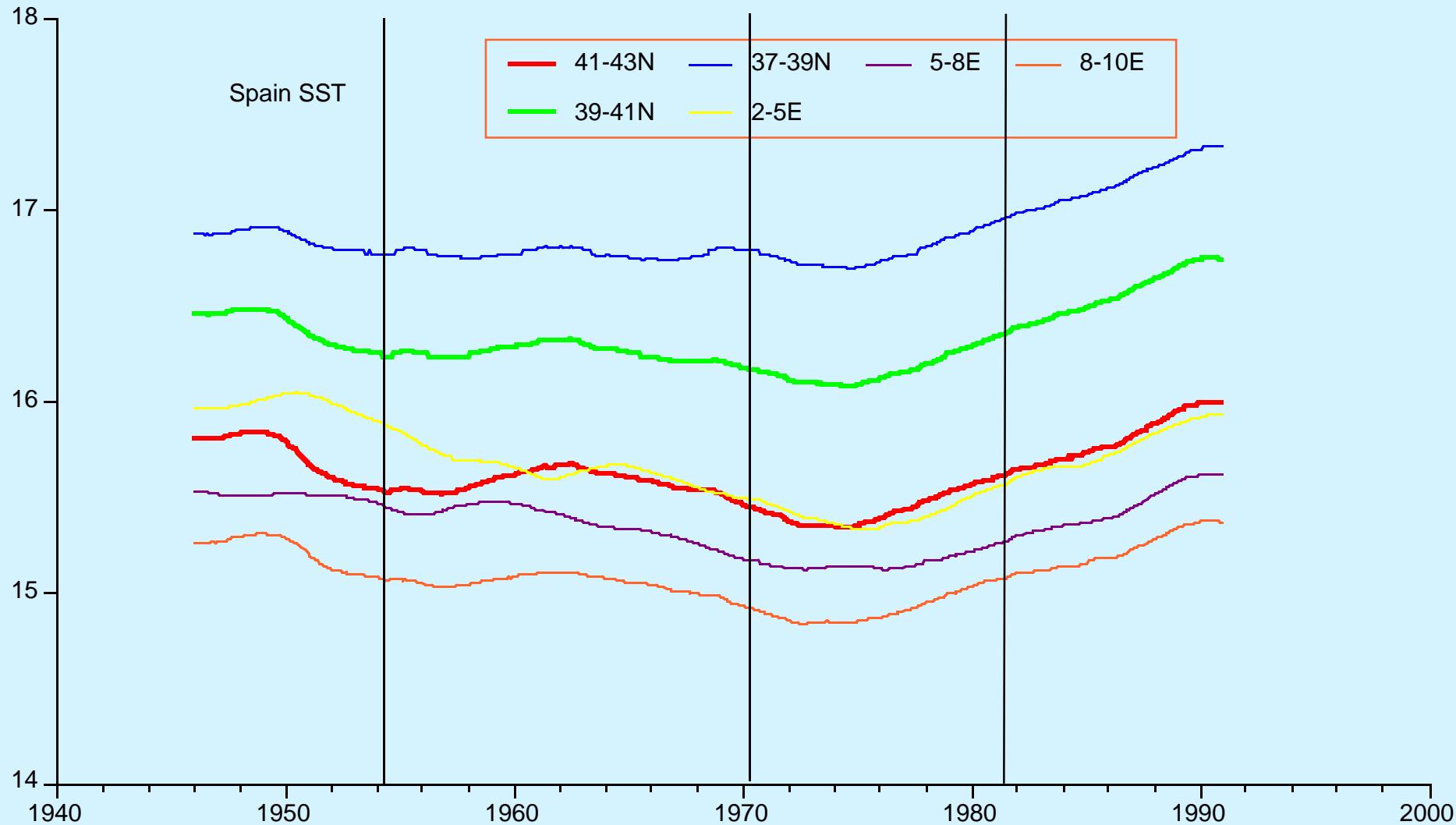
HUMBOLDT ATMOSPHERIC PRESSURE

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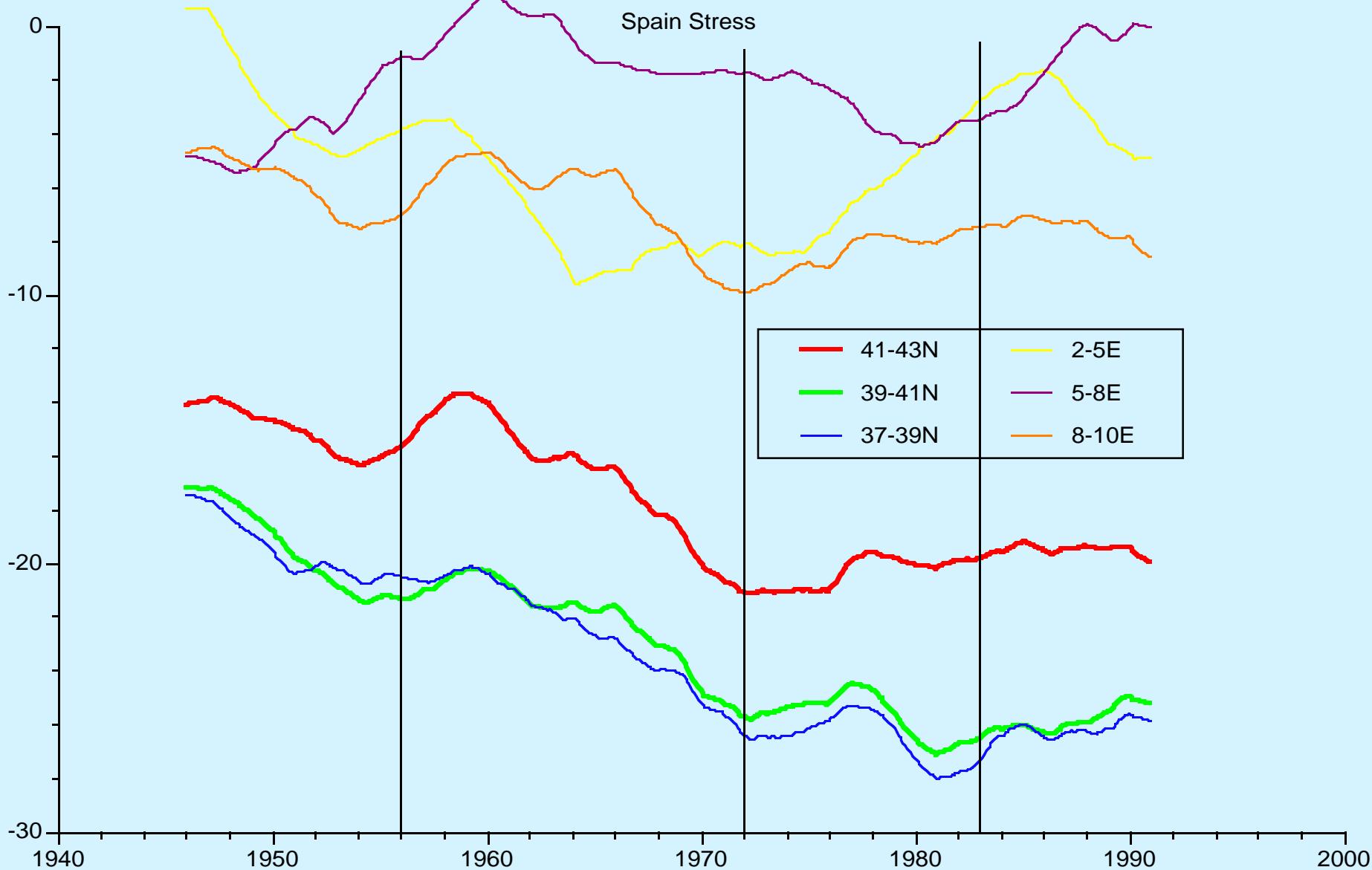
SST OFF SPAIN

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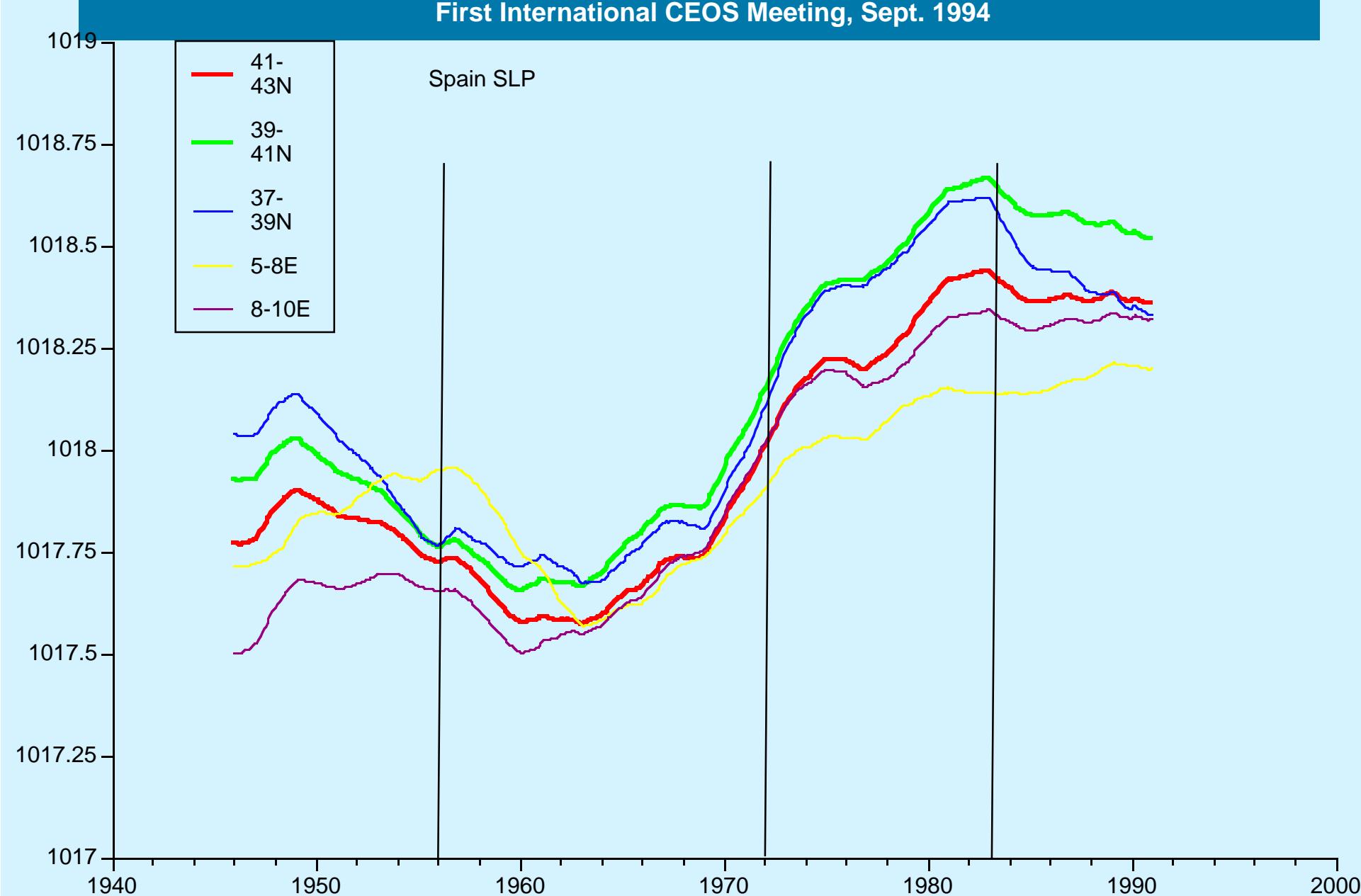
N-S STRESS OFF SPAIN

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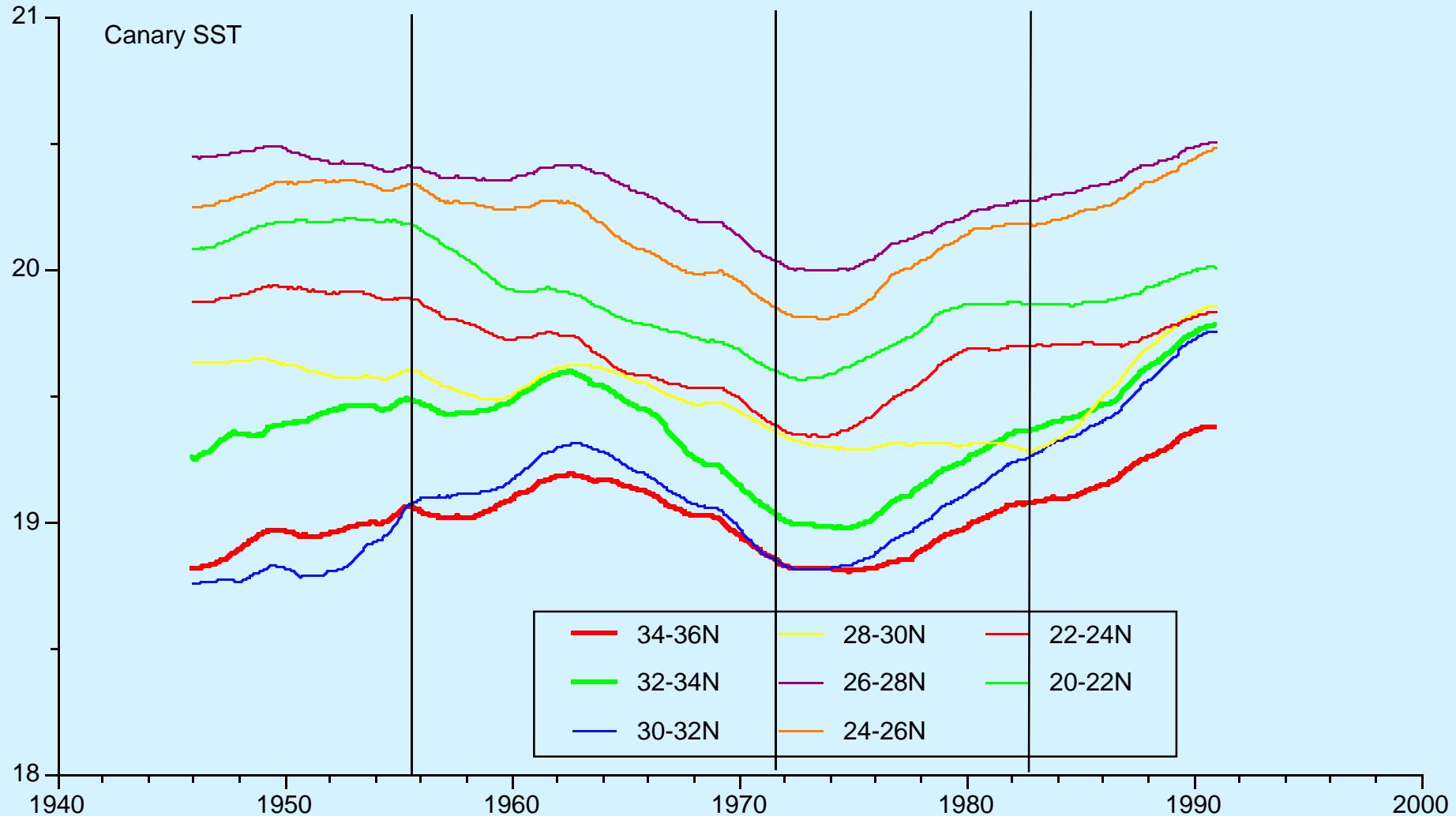
ATMOSPHERIC PRESSURE OFF SPAIN

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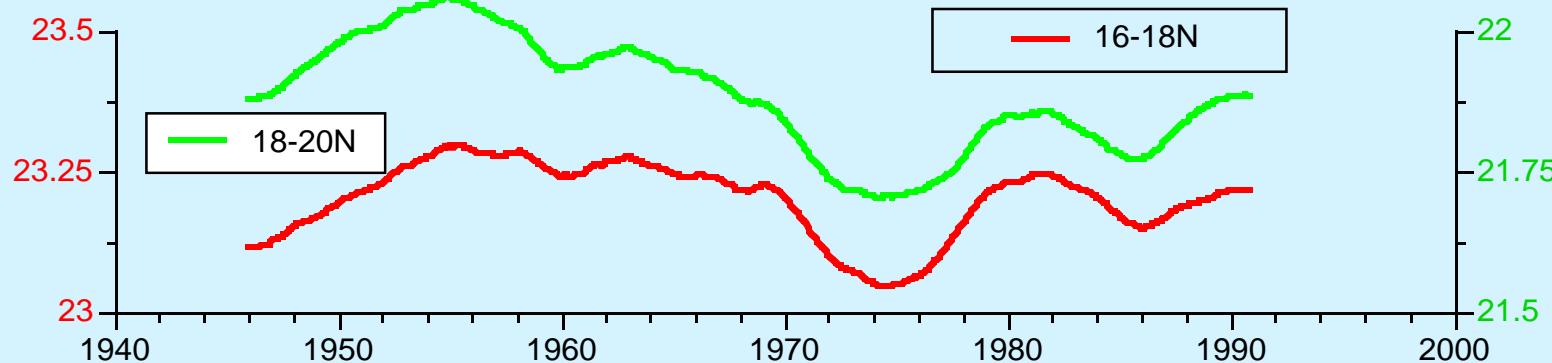
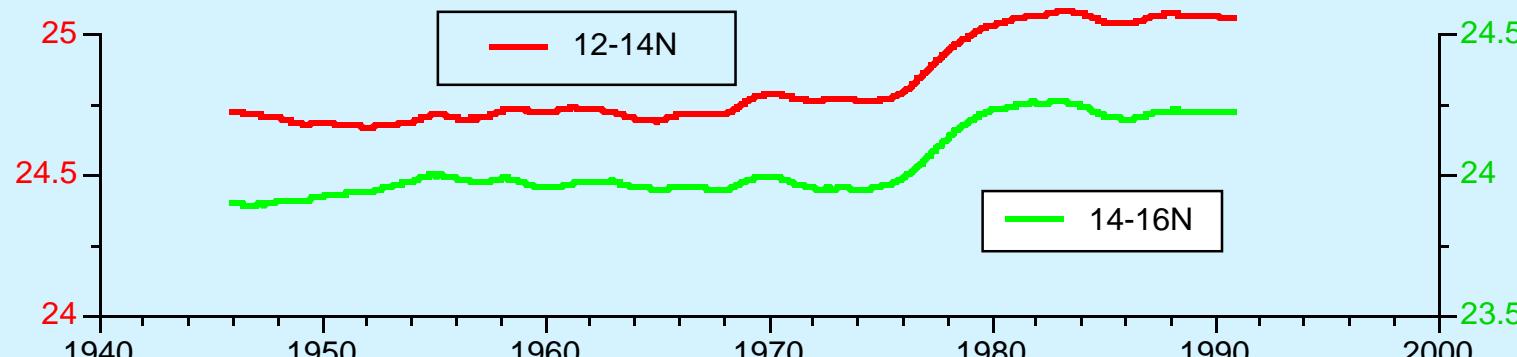
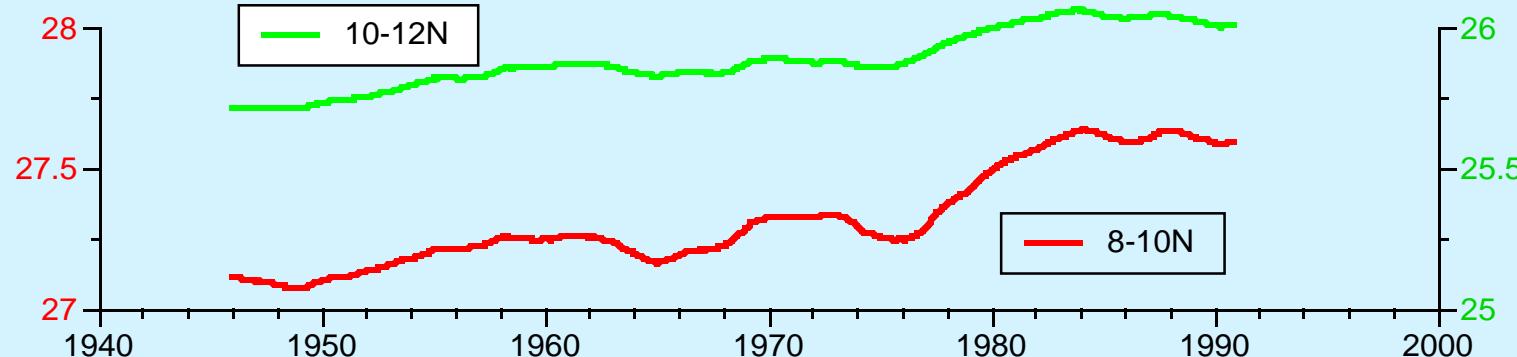
CANARY CURRENT SST - NORTH OF 20N

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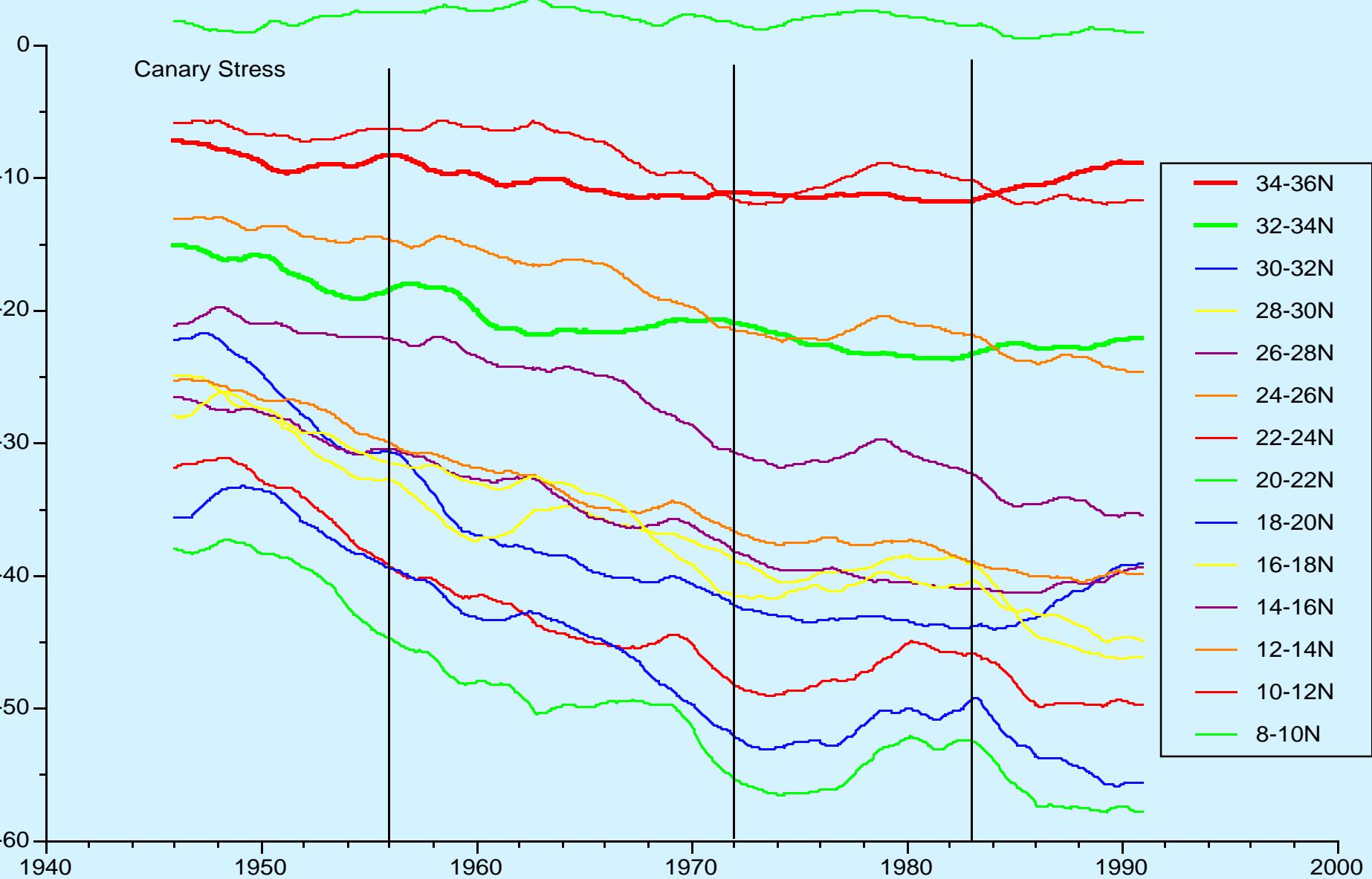
CANARY CURRENT SST - SOUTH OF 20N

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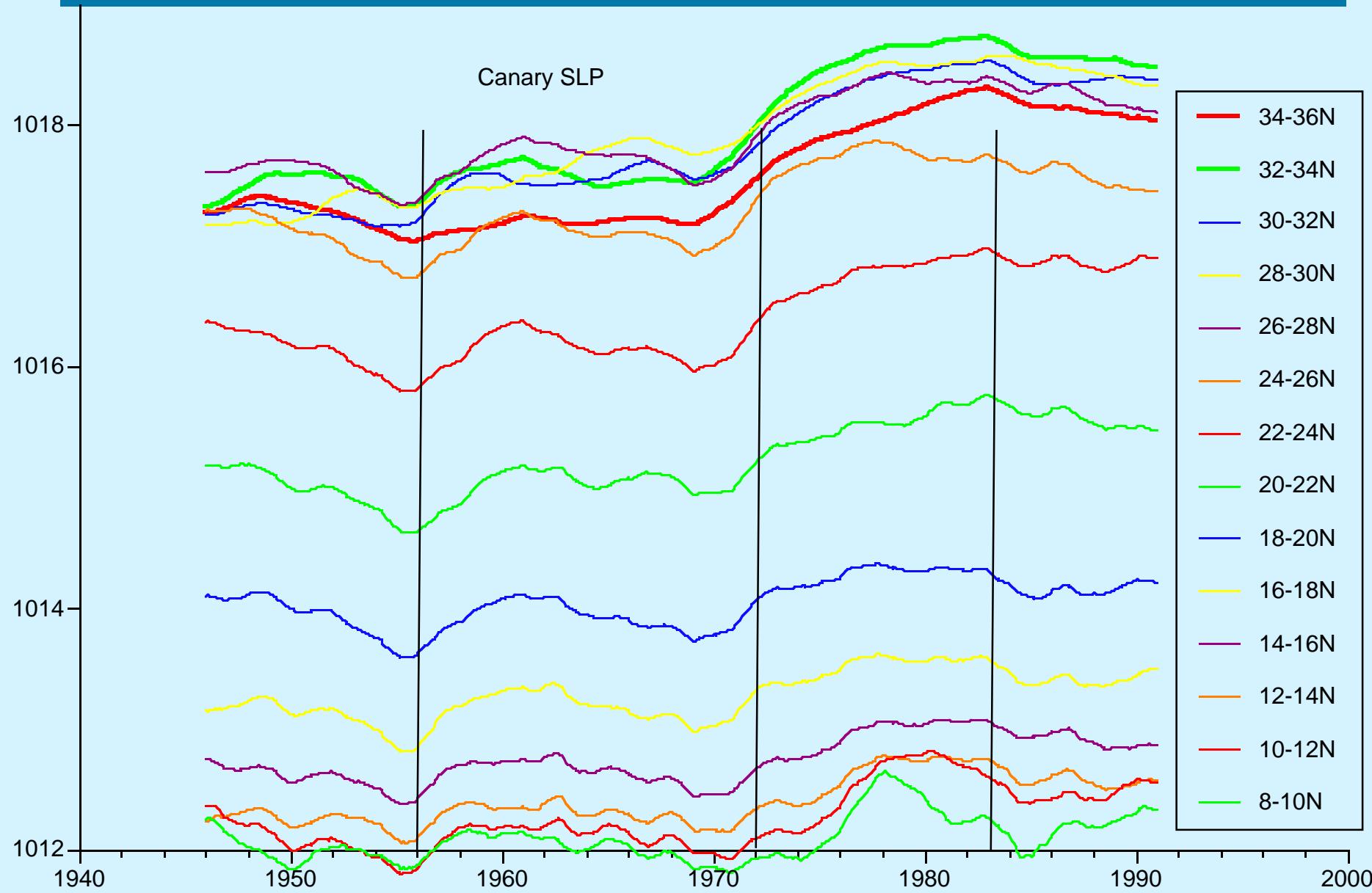
CANARY CURRENT STRESS

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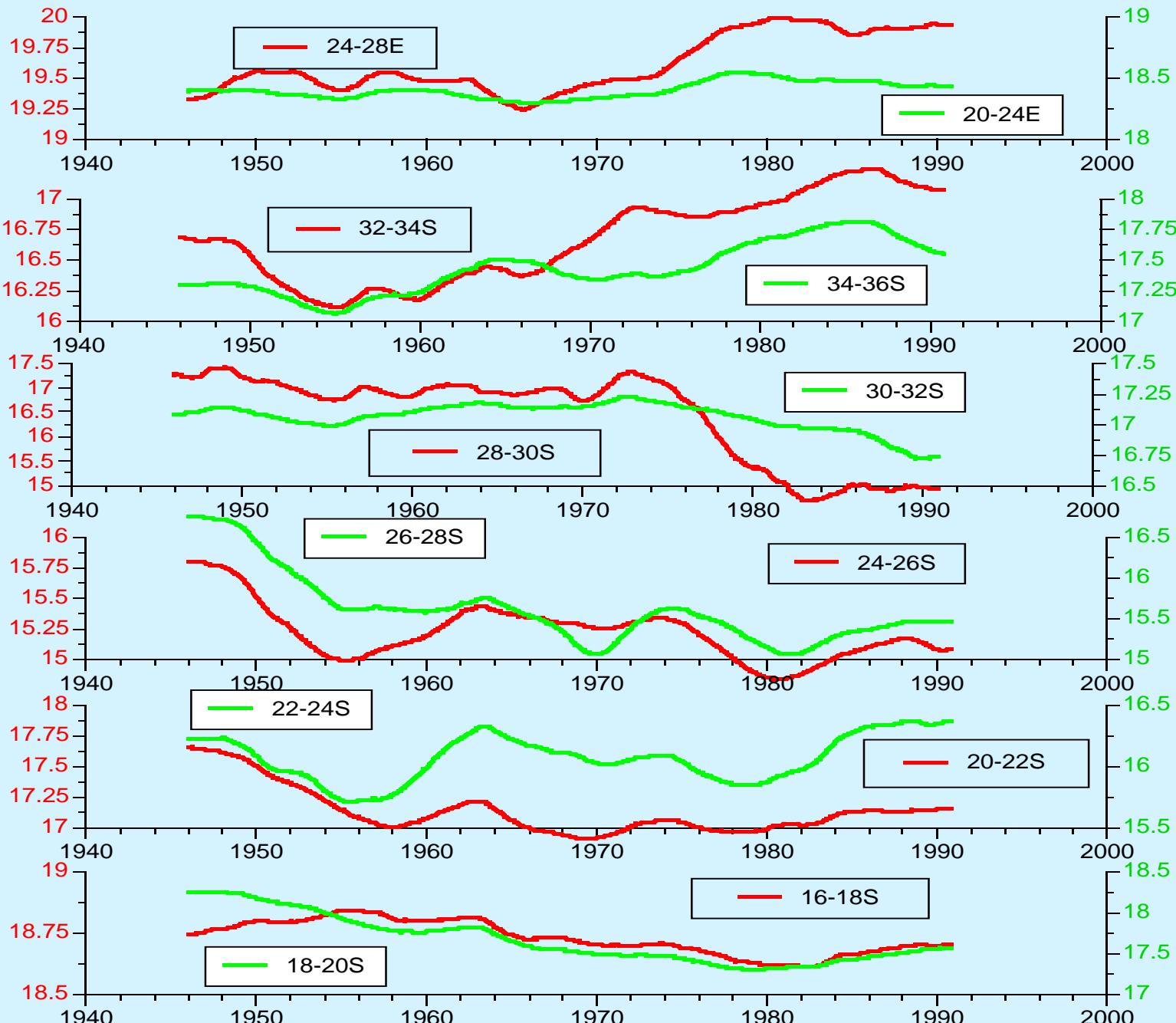


CANARY CURRENT ATMOSPHERIC PRESSURE

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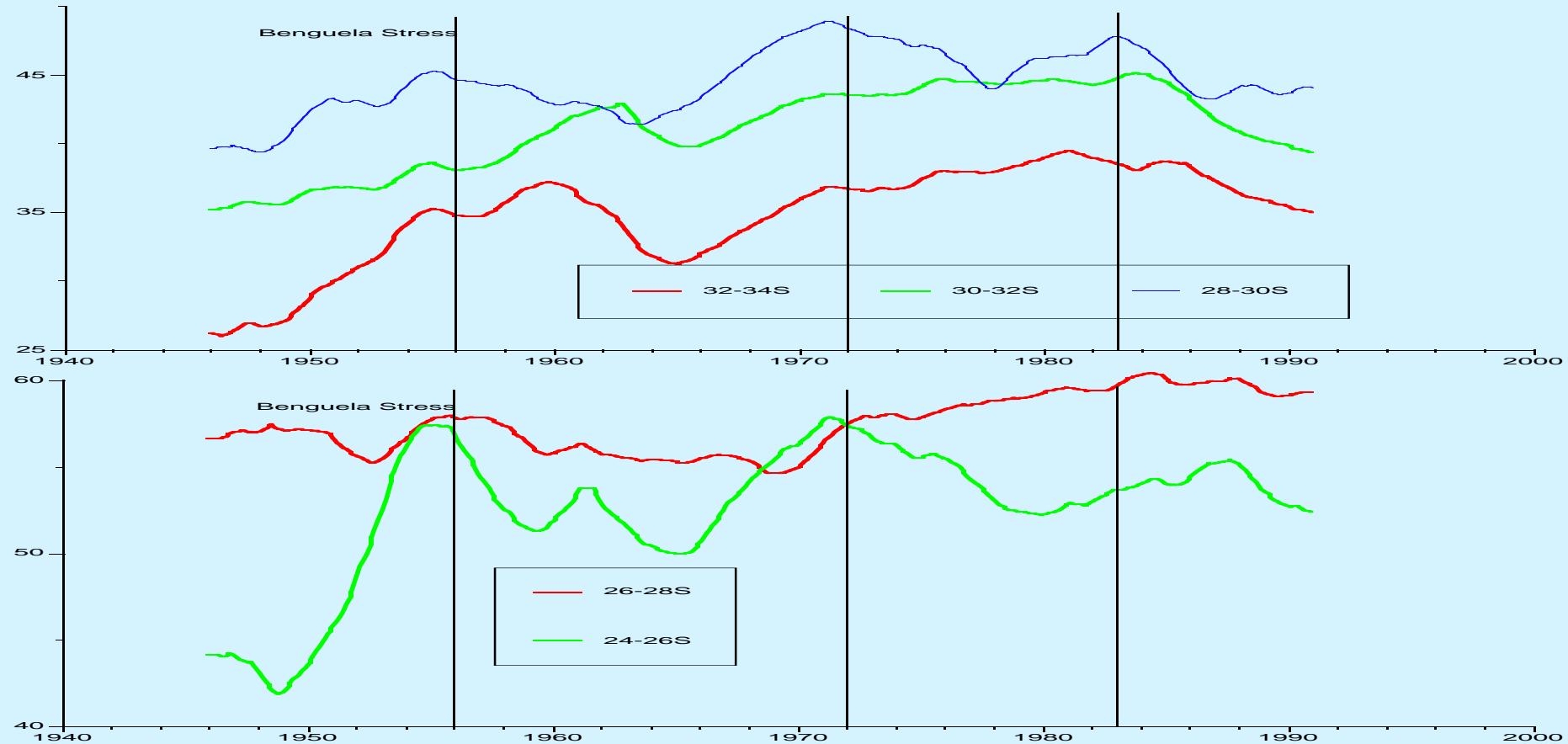


BENGUELA CURRENT SST



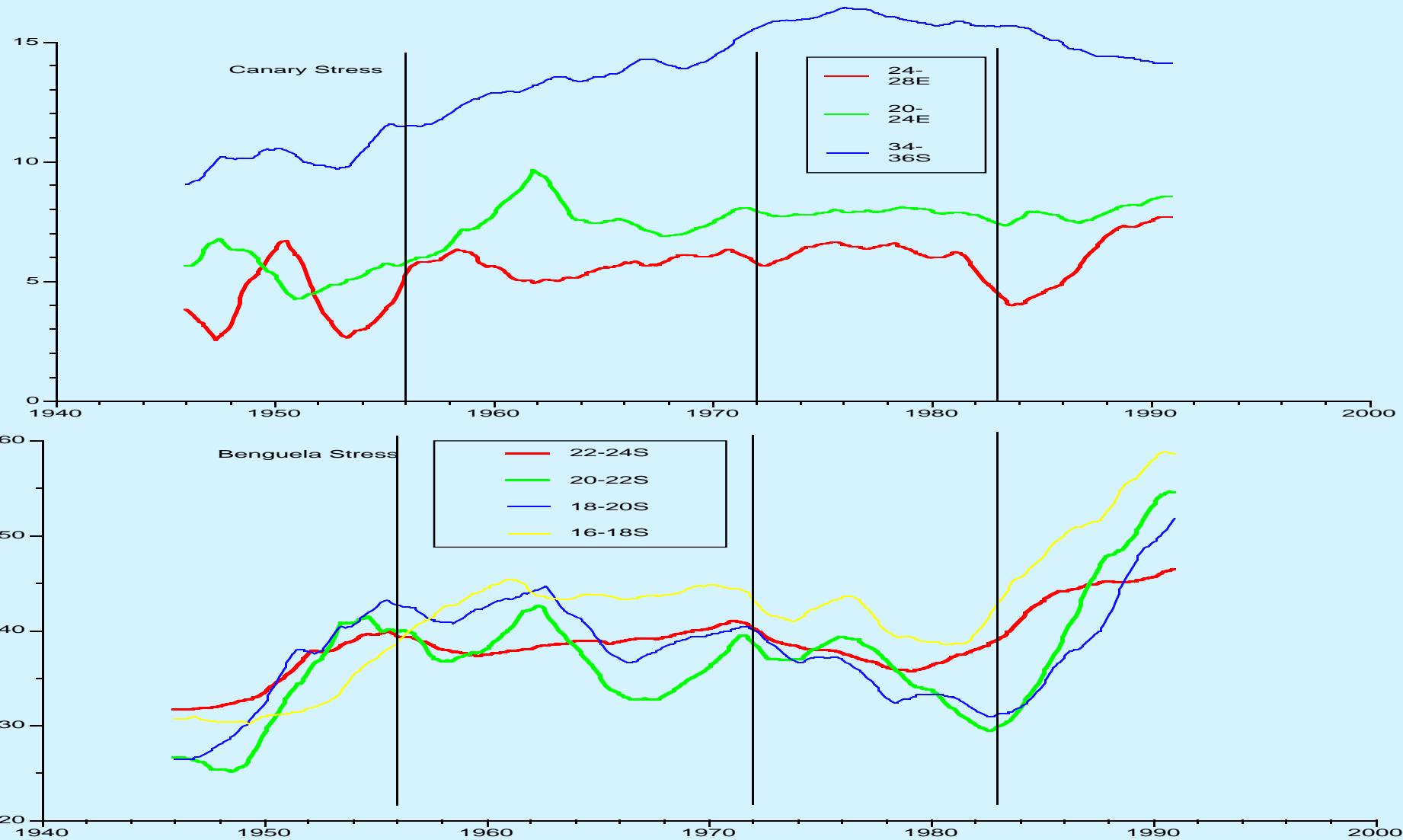
BENGUELA CURRENT N-S STRESS

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BENGUELA CURRENT N-S STRESS

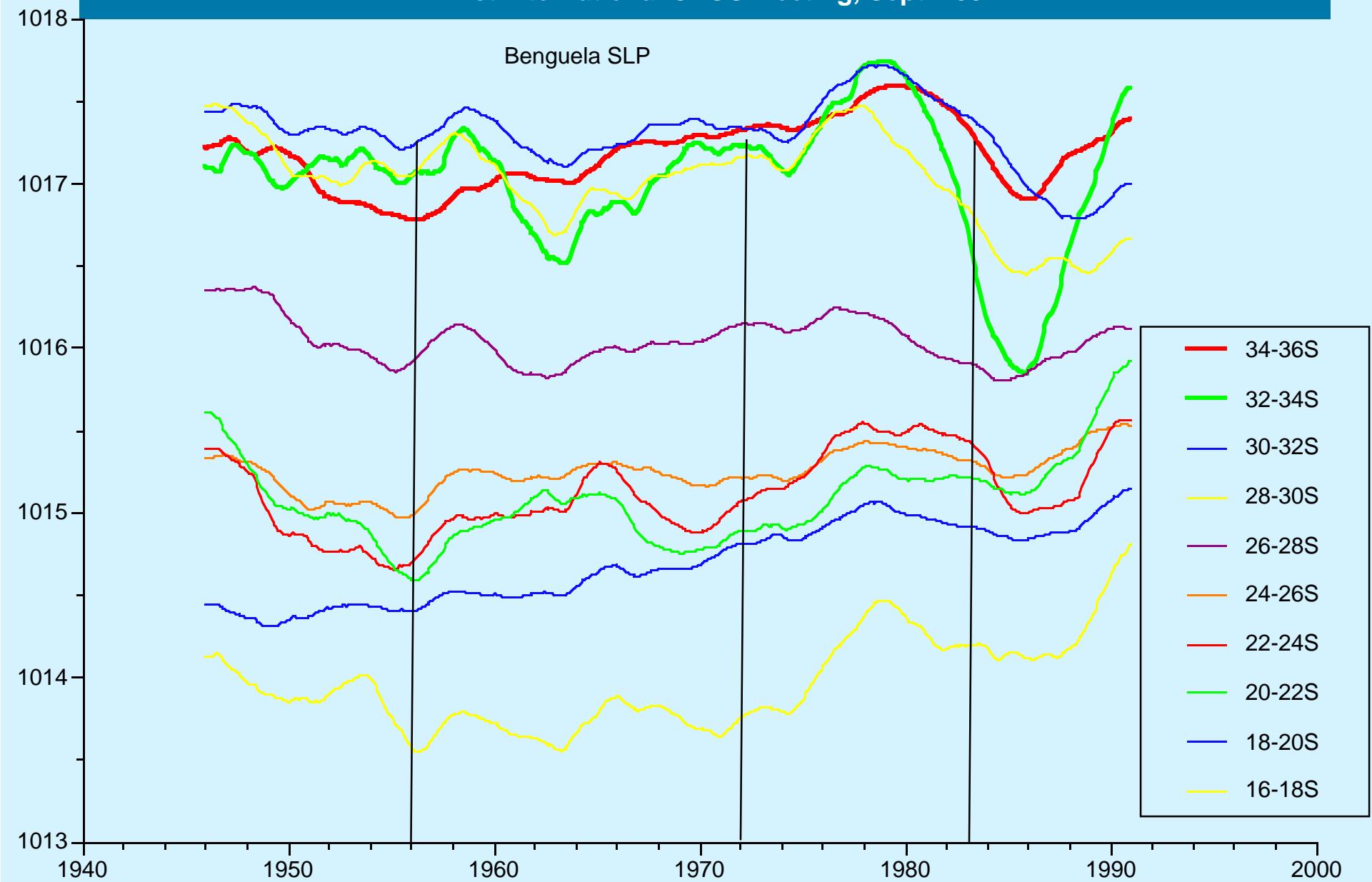
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BENGUELA CURRENT ATMOSPHERIC PRESSURE

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Benguela SLP



SUMMARY

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- Decomposition methods clarify what has actually occurred in the ocean
- Decomposition methods identify regions of similar dynamics as well as transition zones
- Decomposition methods point out possible areas for more detailed inquiry
- Given variability both inshore-offshore and north-south, question becomes where are the fish really located at critical times in their lives